

EXHIBIT C



Boston University School of Medicine



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This report includes my medical opinion on the care Madelyn Linsenmeir received during her arrest and custody at the Springfield Police Department (SPD) on September 29, 2018, during her time in custody at the Western Massachusetts Regional Women's Correctional Center (WCC) of the Hampden County Sheriff's Department beginning on September 30, 2018, and at the Baystate Medical Center, where she ultimately died on October 7, 2018.

In summary, it is my opinion that Ms. Linsenmeir received prompt diagnosis and appropriate treatment at Baystate Medical Center, but due to delays in bringing her in for assessment and treatment, her endocarditis and severe septic shock were very advanced and she was not able to be saved. It is very likely that Ms. Linsenmeir's death was caused by her late presentation to the hospital while in custody. The majority of people with tricuspid valve endocarditis – a type of endocarditis on the right side of the heart – do not die. In fact, most with tricuspid valve endocarditis do not need intensive care, intubation, or urgent surgery(1–4). Ms. Linsenmeir would have been very likely to survive her episode of tricuspid valve endocarditis had she received a timely diagnosis and care for her endocarditis infection before she developed overwhelming septic shock. The likelihood of survival declined as her clinical status deteriorated. On September 29, 2018, Ms. Linsenmeir reported chest pain and other symptoms to the Springfield Police Department. Her symptoms should have prompted an immediate and thorough medical evaluation in an emergency department, which almost certainly would have revealed endocarditis and immediate initiation of intravenous antibiotics. From September 29 through October 3, 2018, Ms. Linsenmeir did not receive appropriate clinical evaluation or prompt treatment despite several points of interaction with clinical services and with police and correctional staff who could communicate with clinical services. These delays resulted in the progression of her infection and deterioration in her clinical status. Though Ms. Linsenmeir received treatment for alcohol withdrawal during her time at the WCC, she did not receive appropriate monitoring to assess her response to that treatment, including more frequent checks of vital signs checks and/or symptoms, which likely would have further indicated to her care providers the seriousness of her clinical status and her need for immediate medical attention.

It is my opinion that it is more likely than not that Ms. Linsenmeir would have survived if she had received medically appropriate evaluation and treatment any time from September 29 through October 2, 2018. Her chances of survival if appropriately evaluated and treated were very likely from September 29 through at least October 1, and at least more likely than not on October 2. Relatively speaking, her chances of survival if appropriately evaluated and treated were highest on September 29 and declined with the passage of time.

It is more difficult to assess Ms. Linsenmeir's chance of survival if she had received medically appropriate evaluation and treatment on October 3, 2018, though it is certainly possible that she would have survived in that circumstance, particularly if she had received appropriate evaluation and treatment on the morning of October 3.

The opinions expressed herein are correct to a reasonable degree of medical certainty, based on my training and experience, my knowledge of generally accepted medical practices, and the relevant scientific and medical studies and literature.

I. Qualifications

I am a board-certified infectious diseases, addiction medicine, and internal medicine physician and an Assistant Professor at the Boston University Chobanian & Avedisian School of Medicine. I practice at Boston Medical Center, where I care for patients as an infectious diseases consultant and HIV primary care physician. I am also the Medical Director for a drop-in site for people who use drugs, which is focused on reducing medical consequences of substance use, including infection prevention and improving patient engagement. I completed medical training at Harvard Medical School and earned a master's degree from the Harvard Graduate School of Arts and Sciences in Medical Anthropology. I trained in Internal Medicine and Primary Care at Brigham and Women's Hospital before pursuing joint sub-specialty fellowships in infectious diseases and addiction medicine at Boston Medical Center, where I have worked since 2016.

I pursued joint training in infectious diseases and addiction medicine after recognizing clinical gaps in care for people with injection-related endocarditis, including inadequate addiction treatment and withdrawal management, as well as experiences of stigma and discrimination in clinical care which were negatively impacting the health outcomes of people with these serious infections. I routinely care for patients with injection-related endocarditis and was a founding member of the multi-disciplinary endocarditis working group at Boston Medical Center, which facilitates care for people with endocarditis incorporating the expertise of clinicians from across multiple specialties. Over the course of my clinical career, I have treated more than 200 patients with endocarditis. I also have research expertise in injection-drug related infections such as endocarditis. I receive research funding from the National Institute on Drug Abuse to study how to improve care for people with injection-related infections, specifically focusing on improving medication for opioid use disorder and antibiotic treatment and retention. I have published more than 40 peer-reviewed articles in medical journals, most of which focus on the care of people with opioid use disorder and/or serious injection-related infections such as endocarditis, and I am an author of the chapter on infectious diseases in the American Society of Addiction Medicine's textbook, *Principles of Addiction Medicine*(5).

Additionally, I served as the Interim Medical Director at the Massachusetts Bureau of Substance Addiction Services from July 1, 2022 until June 30, 2023 and continue to serve as a consultant and medical advisor. In this role, I offer medical expertise advising on opioid and alcohol detoxification protocols, overdose prevention efforts including naloxone distribution, improving integration of infectious diseases and addiction medicine care, and ensuring quality and case reviews of negative outcomes in the Bureau's licensed facilities. A copy of my current curriculum vitae is attached as Exhibit A to this report.

II. Documents Reviewed¹

I have considered the materials listed in Exhibit B in forming my opinions. Counsel did not provide me with any other facts or assumptions beyond what is in those materials.

III. Endocarditis is a Serious Infection of the Heart Valves That Requires Medical Treatment

Endocarditis is a serious infection of the heart valves that requires treatment with intravenous antibiotics, and sometimes surgery, to be successfully cured(1). Endocarditis develops when bacteria enter the blood stream and form vegetations or collections of bacteria and fibrinous material on the heart valve. Drug injection can be a portal of entry for bacteria that live on the skin or have contaminated the injection equipment or drugs themselves to enter the blood stream. Injection drug use is the most common reason for endocarditis infections among younger people. The vegetations that form on the valve can embolize – or travel – from the heart valve to other sites of the body, causing new sites of infection and interrupting the blood supply of the area affected by the embolus. Additionally, the bacteria (as opposed to the vegetations themselves) can travel in the blood supply to other sites of the body and cause new sites of infection. While injection-related endocarditis can occur on any of the heart valves, tricuspid valve endocarditis on the right side of the heart is especially common among people who inject drugs, likely due to entry of bacteria into the venous circulation following venous injection. In general, the longer endocarditis is left untreated, the larger the vegetation will grow and the more likely surgical intervention will be required.

Mortality is higher in left-sided endocarditis, when the vegetation is formed on the aortic or mitral valve, and lower in tricuspid valve endocarditis, the most common right-sided endocarditis. The vegetations on the left side of the heart are more likely to cause septic emboli to the systemic circulation, including to the brain, leading to strokes. Infections on the left side of the heart are also more likely to disrupt the heart's cardiac output, which is the heart's ability to pump blood to the rest of the body, either through disruption of the mechanical function of the valves or the electrical system of the heart. Left-sided endocarditis more commonly requires surgical management with urgent removal of the infected valve and replacement with a prosthetic valve to address heart failure, risk of emboli, or ongoing infection. Right-sided endocarditis can cause septic pulmonary emboli, which occurs when infected material from the vegetation on the heart valve travels to the lungs. Septic pulmonary emboli can cause abscesses and cavitary lesions in the lungs, lead to chest pain, and develop into more significant lung infections, including pneumonia, larger abscesses, or infection of fluid around the lungs, which may cause shortness of breath, pain, and low oxygen levels. Right-sided endocarditis, on occasion, also requires surgery, often because severe tricuspid valve regurgitation can lead to right-sided heart failure where the right side of the heart is unable to pump blood through the lungs to the left side of the heart. Large vegetations (greater than 20 mm), persistent bacteria, or resistant organisms are other indications for tricuspid valve surgery.

When a patient has endocarditis, bacteria typically can be recovered from blood cultures. Though the symptoms can vary, positive blood cultures, especially with typical bacteria such as *staphylococcus aureus*, trigger clinicians to examine the heart valves more closely, looking for evidence of endocarditis

¹ The citations to the record included in this report are illustrative, but not exhaustive, and if called to testify I may reference any materials that I have reviewed to this point or will otherwise receive during the course of my engagement.

with an ultrasound of the heart. Based on the type of bacteria, clinicians determine the appropriate antibiotic treatment. If the endocarditis is not treated promptly, in addition to possible emboli from the vegetation, the circulating bacteria in the blood can lodge in other sites of the body, including areas with high vascular supply such as the brain, kidneys, spleen, areas with prosthetic materials (e.g., metal, vascular devices, hardware, etc.) or areas with increased blood supply due to recent injury or inflammation. Ongoing infection can lead to a systemic inflammatory response, which results in low blood pressure and subsequently decreased blood supply to essential organs such as the kidneys, liver, and brain, which can then begin to fail. Patients may then experience mental status changes and confusion. If support is not provided and the underlying infection not adequately treated, the systemic impact of the infection, also known as sepsis, can lead to death. As additional sites of infection develop, and organs function and mental status deteriorate, it becomes more difficult to adequately treat the infection and to sustain the individual through the immune response from the infection. In the case of endocarditis, which may disrupt cardiac output mechanically as well, it also becomes more challenging to preserve blood supply to essential organs. Clinicians must support the patient's blood perfusion and oxygenation while simultaneously intervening on the infection with antibiotics and surgeries or procedures to drain large collections (abscesses) or replace valves and remove vegetations. These interventions become riskier and more complicated to perform when there is difficulty maintaining blood pressure or oxygenation. Left untreated, patients can become so sick that surgical intervention becomes too risky to perform.

As endocarditis progresses, a patient's vital signs will continue to deteriorate. Specifically, a patient can become febrile, and/or develop low blood pressure, rapid respiratory rate and/or low oxygen levels. In addition, patients will feel increasingly unwell.

Typically, patients with endocarditis present to the hospital because they are worried about their symptoms. Patients may feel fevers, chills, pain, shortness of breath, or generally unwell. Based on my experiences, and as documented in the literature, concerns among people who inject drugs, about inadequately treated withdrawal, pain, stigma, or legal issues, can lead them to delay seeking treatment(16-19). Additionally, in my experience, some patients who inject drugs may initially confuse their symptoms with opioid withdrawal, but generally they recognize they are potentially experiencing a different illness relatively quickly once the symptoms persist despite use of opioids and/or when the symptoms differ from the symptoms experienced during previous instances of withdrawal. Because patients who use substances are at elevated risk of *both* withdrawal and other medical conditions, it is especially critical that health care staff investigate symptoms of patients who use substances, and it would be medically unreasonable and dangerous to attribute symptoms solely to withdrawal without such investigation.

Patients presenting with any condition, including endocarditis or related symptoms, will be asked a variety of questions about their personal history, medical history, and symptoms. Sometimes patients with opioid use disorder give incorrect information in response to such questions for any number of reasons, including confusion or other mental status changes arising from their illness, language barriers, fear of potential legal consequences, concerns about stigma, and even simple embarrassment at their situation or conduct. However, the standard of care does not permit personnel to ignore reported symptoms merely because they know or suspect that some of the other information provided by a patient is not correct. The standard of care requires that personnel take all reported symptoms seriously and provide all evaluation and treatment indicated by the symptoms. In cases where treating personnel may suspect that the patient is not being honest, it is the medical evaluation and treatment process that either confirms or rules out actual illness based on objective medical information, not mere suspicions or intuitions of dishonesty. In the case of reported chest pain, for example, there exist many relatively

simple medical tests that can quickly provide objective information about the presence or absence of illness, such as a chest x-ray, electrocardiogram (EKG), and echocardiogram.

If patients with endocarditis present to the hospital early enough, they may feel better after their infection is treated with appropriate antibiotics. Additionally, in a hospital setting, any symptoms of withdrawal can be appropriately managed and generally alleviated while the infection is treated. Sometimes the infection may spread and patients will feel persistent fevers, weakness, dizziness, and pain at sites of infection, as well as feelings of fear and anxiety. Patients often report fear of the infection itself, and may be concerned that their care will be different because of their substance use. The primary clinical team and multiple specialists – including infectious disease physicians, cardiologists, cardiac surgeons, and, if available, addiction medicine specialists – will see the patient. The number of specialists and the discussions of possible outcomes (potentially including need for surgery, prolonged intravenous antibiotic treatment of 6 weeks or more, and the potential for complications) can be overwhelming. Though some patients struggle with the regimented nature of the hospital and leave the hospital prematurely, many report that they view the hospitalization as a motivating moment and opportunity to simultaneously address their substance use and serious infection(21,22). For those patients who are able to be managed with antibiotics alone and without surgery, the patient may receive the IV antibiotics in the hospital, or may ultimately move to a nursing facility for completion of the antibiotics, or in some cases can return at home and receive the remaining antibiotic treatments from a visiting nurse. Patients who clinically deteriorate may need to be transferred to an intensive care unit to receive central venous access (large IVs), through which multiple medications are administered, including medications to support blood pressure. If patients have difficulty breathing due to evolving heart failure that causes fluid to back up in the lungs or due to serious infections, they may need to be intubated and receive mechanical ventilation. These life-supporting measures can be quite traumatic. Medications are provided to address pain and anxiety. Many patients with advanced endocarditis require cardiac surgery, which requires sternotomy—or cutting open the sternum. The decision about who requires an operation and when that operation can occur is complex and is often very stressful for patients. Following surgery, patients often have significant pain but tend to recover well, especially if they are young. Antibiotics are typically continued for a prolonged period, similar to those patients who do not require surgery.

IV. Endocarditis Progression and Likelihood of Survival

Inpatient mortality for all endocarditis types is approximately 10-15% and approximately 30% at one year(1,6,7). Mortality is lower for patients with tricuspid valve disease, standing at approximately 5-10%(4,20). There is a perception that patients with endocarditis who inject drugs have poorer outcomes, even among clinicians. However, short-term outcomes (e.g., survival on discharge) for people with injection-drug related endocarditis are favorable compared to people with endocarditis from other causes(7,8). Patients with injection drug-related endocarditis are more likely to have right-sided endocarditis, which has lower mortality rates. Patients with injection-related endocarditis also tend to be younger, with comparatively fewer co-morbidities and medical problems than older groups of patients with endocarditis. For example, the absence of significant kidney, lung, or heart disease makes it so patients can withstand the infectious insults and recover more quickly. Mortality over the following year after the acute hospitalization remains a risk as described above, potentially related to recurrence of substance use, incomplete antibiotic treatment, lack of social support, and challenges in the opioid use disorder treatment system(12,13). In my experience, patients with substance use disorder with social support experience better long-term outcomes following an episode of endocarditis.

In systemic infections like endocarditis, rapid initiation of antibiotics is essential. Rapid antibiotics prevents the infection from spreading and may limit the body's inflammatory response to infection, which can cause more systemic complications. Studies of sepsis show that even short delays of several hours in providing antibiotics can worsen mortality(9). Conversely, early intervention in sepsis leads to better outcomes.

It is important to note that hospitalizations for people who inject drugs can be motivating periods to address their substance use, initiate medications for opioid use disorder, and be connected to additional medical and social resources(10). Over the past 10 years, in Massachusetts especially, there have been efforts to improve experiences in the acute care hospital to take advantage of this opportunity(11).

V. Ms. Linsenmeir's Experience of Endocarditis

A) Prior to Arrest by the Springfield Police Department

The information I reviewed regarding Ms. Linsenmeir's experience prior to her arrest by SPD on September 29, 2018 included records from the Brattleboro Retreat (Documents 1-2) and text messages between Ms. Linsenmeir and her family (Documents 35-37), as well as documentation of history she provided to the Infectious Disease team at Baystate on October 5, 2023 (Document 11).

As a result of this information, it is my medical opinion that Ms. Linsenmeir already had endocarditis before she was taken into SPD custody. I also note that Ms. Linsenmeir's statement in her text messages to her family that she was scared to go to the hospital because "the hospital checks for warrants" and she didn't "want to go to jail [like] this" is consistent with my experience with patients living with substance use disorder, who often delay seeking treatment for similar reasons.

In the text messages to her family prior to her arrest, Ms. Linsenmeir reported that her chest hurt and that her knee was swollen. While these symptoms are consistent with both endocarditis and multiple other diagnoses, including pneumonia of various etiologies, the evolution of her symptoms that she reported to her family prior to her arrest on September 29, 2018 and ultimate diagnosis make it nearly certain that Ms. Linsenmeir had an evolving endocarditis infection prior to her incarceration (Documents 35-37). The likely etiology of Ms. Linsenmeir's endocarditis was injection drug use based on her risk factors and the identified organism, *methicillin-resistant staphylococcal aureus* (MRSA). MRSA is a bacteria that lives on the skin and is a common cause of serious infections in people who inject drugs.

Dr. Oo's infectious disease consult note from Baystate documented that Ms. Linsenmeir had been using injection drugs but felt well until one month prior to arrest when she began to note shortness of breath, cough with hemoptysis (blood in sputum), and evolution of weakness and difficulty ambulating. Even without the information in Dr. Oo's infectious disease consult note, it would be my opinion that Ms. Linsenmeir had evolving infectious endocarditis prior to her arrest, but this additional information is consistent with an evolving endocarditis infection in someone who has used injection drugs. Accordingly, while not necessary to my conclusion that Ms. Linsenmeir had infective endocarditis prior to her arrest, the information in Dr. Oo's infectious disease consult note provides further support for my opinion.

B) September 29, 2018

On September 29, 2018, Ms. Linsenmeir was arrested and taken into custody by the SPD. The information I reviewed regarding Ms. Linsenmeir's time in SPD custody on September 29, 2018, included video documentation of booking (Document 48), excerpts from Ms. Rodriguez's deposition (Documents 39-40), and the arrest and injury reports (Documents 3, 34). This information revealed that Ms. Linsenmeir reported chest pain, difficulty breathing, lightheadedness, knee pain, and problems with her feet. In the booking video, Ms. Linsenmeir gestures to her knee and chest, seemingly to describe the pain she is experiencing. She walks with a limp. Her knee pain and feeling that she was going to faint are noted in the officer's prisoner injury report. According to the female detention attendant, after being taken to her cell, Ms. Linsenmeir complained of pain every 15 minutes for a period of hours.

Ms. Linsenmeir's condition on September 29, 2018, should have triggered an immediate call for medical attention. Chest pain can be a symptom of multiple serious conditions that cannot be ruled out without a proper medical examination. Determining if a patient's chest pain is dangerous requires immediate medical attention and cannot be ignored. It is likely that Ms. Linsenmeir's chest pain was a result of septic pulmonary emboli, which very likely would have been identified had she undergone basic medical evaluation for chest pain. A patient presenting with such symptoms in the emergency department of any hospital would almost certainly receive an evaluation of vital signs, physical exam, EKG, chest x-ray, laboratory tests, and additional testing such as a CT scan or echocardiogram based on the likely diagnosis. The minimally adequate response to these symptoms would be to transfer a patient to an Emergency Room for evaluation. Because the SPD ignored the obvious serious risk to Ms. Linsenmeir's health, she did not receive this care. Had Ms. Linsenmeir received medical attention on September 29, 2018, she would have been very likely to survive because she would have received a diagnosis and appropriate antibiotic therapy before she had developed overwhelming septic shock.

C) September 30, 2018

On September 30, 2018, Ms. Linsenmeir was transferred to the WCC. The information I reviewed regarding Ms. Linsenmeir's time in WCC custody on September 30 included video from the intake areas of WCC and during a medical visit (Documents 54-55); booking documentation in the jail management system (Document 4); WCC Health Services documents (Document 5); the depositions transcripts of Ms. Barrett, Ms. Couture and Ms. Wisnaskas (Documents 71, 73, 74); and the declaration of Ms. Champagne (Document 63).

This information revealed several aspects about Ms. Linsenmeir's health. First, she reports pain in her torso (chest, back) during booking. Second, she reports knee pain, which she says is from being hit with a baseball bat. Swelling is documented without erythema (redness). Third, during her medical intake she is asked if she has any cardiac issues, but no questions are specifically asked about chest pain. Fourth, she reports her last drink and opioid use was on September 28, 2018. She has evidence of minimal alcohol withdrawal on the documented CIWA score and mild opioid withdrawal on the Clinical Opioid Withdrawal Score. On video, she appears fatigued and is observed slumped in a chair and walking with a limp. Ice and ibuprofen are ordered for her knee and a lower bunk is provided. Additionally, chlordiazepoxide is provided for treatment of alcohol withdrawal.

Even though Ms. Linsenmeir's vitals were T98.2, HR 100, RR18, BP 100/80, it is still very likely that she had endocarditis at this time based on the timing of her symptoms, fatigue, and eventual diagnosis. Normal vital signs at one time point do not exclude a diagnosis of a serious infection. Even though Ms. Linsenmeir's vitals were documented as normal, her condition on September 30 should have

triggered a call for medical attention. Ms. Linsenmeir reported pain in her torso (chest, back) at intake. As noted above, a report of chest pain requires immediate medical evaluation, but no cardiopulmonary exam is documented. Additionally, a swollen knee following being hit by a baseball bat should prompt evaluation for a fracture with an x-ray. The failure to seek or provide medical attention for Ms. Linsenmeir on September 30 – particularly for her report of chest pain – had no medical justification, ignored obvious serious risks to her health, and did not meet the medical standard of care for these reported symptoms. Although not essential to this conclusion, this conclusion is reinforced by the fact that Ms. Champagne, Ms. Linsenmeir's roommate starting September 30, reports that Ms. Linsenmeir reported symptoms such as chest pain to staff on multiple occasions and requested medical attention. Had Ms. Linsenmeir received medical attention on September 30, 2018, she would have been very likely to survive as she would have received prompt diagnosis and treatment prior to progression to septic shock.

D) October 1, 2018

The information I reviewed regarding Ms. Linsenmeir's time in WCC custody on October 1 included video documentation of her returning from court and in corridor 2 and during her medical visit (Documents 41, 57-58), segments of Ms. Ferriter's deposition transcript (Document 69), and medical records (Document 5). This information revealed Ms. Linsenmeir again appearing unsteady while walking, as well as being placed in a wheelchair. She had a visit for a PPD (a routine TB screening) but no other medical evaluation is documented. Given Ms. Linsenmeir's unsteady gait, her placement in a wheelchair, and her treatment for alcohol withdrawal with chlordiazepoxide, at a bare minimum the medical staff should have investigated her symptoms and obtained vital signs. Had the medical staff done so, it is likely that the investigation would have revealed that Ms. Linsenmeir had chest pain, weakness, and fatigue, and that her vital signs would have shown an elevated heart rate and potentially an elevated respiratory rate. This in turn would have triggered a referral to a hospital, where she would have very likely been diagnosed with endocarditis. There is no medical justification not to investigate why a young, ambulatory patient needs a wheelchair. Had Ms. Linsenmeir received medical attention on October 1, 2018, she would have been very likely to survive because, again, she would very likely have been diagnosed with endocarditis and received prompt treatment prior to evolution of septic shock.

E) October 2, 2018

The information I reviewed regarding Ms. Linsenmeir's time in WCC custody on October 2 included video documentation of Ms. Linsenmeir climbing stairs with Ms. Phipps and speaking with Ms. Couture (Documents 42, 59-61). I also reviewed segments of deposition transcripts from Ms. Russ, Ms. Phipps, and Ms. Couture (Documents 66, 72-73), and medical records (Document 5). Ms. Linsenmeir is seen struggling to climb a single flight of stairs and sustaining a fall during that attempt. She requires physical assistance from Ms. Phipps to ascend the stairs, appears confused and slow when given instructions about where to go, and appears to be out of breath; specifically, she is seen breathing through an open mouth. She is seen talking with Ms. Couture. Ms. Phipps testified that she would have conveyed information about Ms. Linsenmeir's fall and difficulty climbing stairs when she was brought to the infirmary, and the fact that Ms. Couture speaks with Ms. Linsenmeir for approximately five minutes upon arrival for a routine urine sample is suggestive that Ms. Couture was aware that something unusual had occurred. These are quite dramatic outward changes from just several days before and are signs of a serious acute illness.

Multiple serious disease processes can cause this presentation. Common conditions such as pneumonia, low blood pressure, hemorrhage, and infection (such as endocarditis) should have been

considered and ruled out. An immediate medical evaluation was therefore necessary to determine the cause of the fall, apparent confusion, shortness of breath, and other symptoms. That medical evaluation would have included, among other things, taking her vital signs, a physical examination, and asking her questions about her symptoms. Ms. Linsenmeir had previously repeatedly reported chest pain and other serious symptoms and it is virtually certain that she would have been continuing to experience those same symptoms on October 2 as her endocarditis continued to progress. It is therefore highly likely that, if evaluated at that time, the evaluation would have revealed that Ms. Linsenmeir was experiencing chest pain, difficulty breathing, and other cardiovascular symptoms. That information in turn should have triggered a trip to the hospital where Ms. Linsenmeir would have received a chest x-ray and cardiac examination that would have led to the diagnosis of her endocarditis. Yet there is no documentation that the WCC's medical staff took Ms. Linsenmeir's vital signs at that time, and no evidence that they conducted any form of physical examination. There is also no documentation that the WCC's medical staff asked Ms. Linsenmeir any questions about her condition or symptoms. The WCC's medical staff claim to have no memory of what they discussed with Ms. Linsenmeir in the roughly five-minute conversation in medical after her fall. Thus, the information documented and provided by the WCC's staff indicates that when Ms. Linsenmeir visited the WCC's medical staff on October 2 after her fall, the WCC's medical staff did nothing more than take the urine sample for a routine STI screening and send her away. The failure to seek or provide medical attention for Ms. Linsenmeir on October 2 had no medical justification, ignored obvious serious risks to her health, and did not meet the medical standard of care for these reported symptoms.

Had Ms. Linsenmeir received appropriate medical attention on October 2, 2018, she would have more likely than not survived. Ms. Linsenmeir experienced some difficulty while exerting herself, but she was more comfortable at rest. Given her eventual diagnosis of endocarditis, these symptoms suggest evolving sepsis which had not yet progressed to septic shock. This means that with prompt diagnosis and antibiotic therapy at this time, Ms. Linsenmeir would likely have been stabilized. Even if her endocarditis had progressed to the point of needing cardiac surgery, this potentially life-saving intervention would probably still have been feasible on October 2, 2018.

F) October 3, 2018

The information I reviewed regarding Ms. Linsenmeir's time in WCC custody on October 3 included video of Ms. Linsenmeir sitting in the day room during orientation (Document 43), Sandi Dailey's deposition transcript (Document 68), and WCC medical records (Document 5). Ms. Linsenmeir appears extremely fatigued and lacks strength to lower herself into her chair in a controlled manner, instead almost flopping into the chair. This information reveals progression of Ms. Linsenmeir's fatigue, which is likely due to further progression of her infection. She was likely feeling systemically unwell and fatigued, and was likely having general body aches as well as knee pain and chest pain. Ms. Dailey testified that later that day, Madelyn could not walk, could barely sit up or move, and could only reach the toilet by rolling out of a lower bunk and crawling on her hands and knees. (Document 68). It is my opinion that at some point during October 3, Ms. Linsenmeir entered into septic shock. Had anyone investigated Ms. Linsenmeir's symptoms on October 3, it is very likely she would have reported feeling very ill, and that in any event, medical staff would have perceived her as very ill. Had anyone checked Ms. Linsenmeir's vital signs on October 3, they would likely have shown an elevated heart rate and respiratory rate and possibly low oxygen levels or low blood pressure.

It is more difficult to assess Ms. Linsenmeir's chance of survival if she had received medically appropriate evaluation and treatment on October 3, 2018, though it is certainly possible that she would

have survived in that circumstance, particularly if she had received appropriate evaluation and treatment on the morning of October 3.

G) October 4, 2018

The information I reviewed regarding Ms. Linsenmeir's time in WCC custody on October 4 included WCC medical records (Document 5), excerpts of transcripts of depositions from Ms. Neill and Ms. Belle-Isle (Documents 74, 76), the incident report (Document 7), and ambulance records (Document 8). This information revealed that Ms. Linsenmeir was found initially unresponsive in her cell with the following vital signs: HR 94, RR 50, BP 80/50. They were initially unable to obtain an O2 saturation level or body temperature. An emergency response was coordinated with additional nursing support and EMS, and the patient was transferred to Baystate Medical Center. During transport, after Ms. Linsenmeir had been given supplemental oxygen and her mental status improved, she reported chest pain and shortness of breath. Ms. Linsenmeir likely experienced increasing confusion due to low blood pressure, low oxygen level, and metabolic changes associated with evolving septic shock. It is possible she experienced a large embolus from a vegetation on her tricuspid valve into her lungs which worsened her clinical status. She was likely in pain, and based on my experience with numerous patients with this condition, scared and confused. Based on the EMS documentation during transport, Ms. Linsenmeir was only oriented to two of three basic orientation questions (person, place, and time), which indicates a serious medical issue.

The medical record notes from Ms. Belle-Isle notes, "I asked pt if she took anything" and under assessment notes, "R/o opi[a]te withdrawal, r/o internal bleed, rule out drug OD" (Document 5, pp. 21-22). While reviewing potential ingestions is prudent in someone with a history of substance use, this patient had a respiratory rate of 50. People who experience overdose typically have slowing of their respiratory rate; 50 is very high—almost one complete breath per second. The fact that Ms. Belle-Isle investigated a potential OD notwithstanding vital statistics that were directly contrary to an OD suggests that Ms. Belle-Isle anchored her investigation on Ms. Linsenmeir's substance use without considering or investigating alternative causes of her symptoms.

H) Ms. Linsenmeir's treatment at Baystate

Ms. Linsenmeir presented to Baystate with advanced methicillin-resistant staphylococcus aureus (MRSA) endocarditis infection. Based on review of records from Baystate (Documents 9-27) and Medical Examiner Records (Document 29-30), it is my medical opinion that her death was caused by the delay in presentation to the hospital for medical assessment and subsequent treatment. She received high-quality emergency and critical care while at Baystate, but her infection had progressed too far to save her life. She received a rapid diagnosis of endocarditis with pulmonary emboli with point of care ultrasound, CT scan, and transthoracic echocardiogram in the Emergency Department. MRSA grew rapidly in her blood, suggesting that she had a high-grade infection. She received appropriate antibiotic therapy and consultation with specialists including infectious diseases, orthopedic surgery, cardiology, and cardiac surgery. She rapidly required intubation and initiation of vasoactive medications to maintain her blood pressure and sustained a cardiac arrest. She was appropriately resuscitated. Given her large tricuspid valve vegetation, a cardiac surgery specialist evaluated Ms. Linsenmeir, but her clinical condition was too tenuous to pursue surgical intervention at that time. Had her treatment been initiated earlier, she may not have needed urgent surgical intervention and if she needed surgery, she likely would have been clinically stable enough to receive it. The invasive medical interventions Ms. Linsenmeir received such as intubation and central lines are painful and anxiety-provoking in most patients. After

her cardiac arrest, she received chest compressions before ultimately dying from complications from her endocarditis and associated overwhelming infection.

There are several pieces of evidence from Ms. Linsenmeir's hospitalization which demonstrate the advanced status of Ms. Linsenmeir's infection at time of transport:

- 1) Ms. Linsenmeir was critically ill and minimally responsive at the time she was transported (Document 8).
- 2) On arrival to the hospital, a bedside echocardiogram performed in the Emergency Department on October 4, 2018 showed a vegetation on the tricuspid valve. A formal echocardiogram on October 5, 2018 documented a tricuspid valve vegetation (3.2 cm x 1.4 cm) with regurgitation, mild pulmonary hypertension, and right ventricular dilation. Right ventricular dilation suggests the impact on the heart did not develop within hours, but rather is more consistent with longer duration of severe regurgitation.
- 3) Ms. Linsenmeir had disseminated MRSA infection, including knee septic arthritis. It is unclear if her injured knee was seeded with infection from her heart or if her right knee symptoms were caused entirely by the infection. Either way, disseminated MRSA infection typically only occurs after a patient has had infective endocarditis for quite some time, providing further evidence that Ms. Linsenmeir almost certainly had endocarditis at the time she was arrested.

VI. The Use of Proper Alcohol Withdrawal Protocols Very Likely Could Have Saved Ms. Linsenmeir's Life

Alcohol withdrawal can be life threatening and requires ongoing assessments with a structured tool such as CIWA(14,15) and vital sign assessments. Following initiation of treatment for alcohol withdrawal, regular assessment of symptom severity and vital signs are a minimum threshold. WCC protocols in 2018 did not require this monitoring and it did not occur for Ms. Linsenmeir. Had Ms. Linsenmeir's vital signs and/or symptoms been checked between October 1 and October 3, it is very likely that an abnormality would have been detected, prompting further medical evaluation that would have diagnosed and treated her endocarditis at a time when her chance of survival was still more likely than not. In Ms. Linsenmeir's case, it would be expected that she would have reported chest pain, weakness, and fatigue, and that she would have become febrile, her blood pressure would have gradually decreased, her heart rate and respiration would have increased, and eventually her oxygen level would have declined.

VII. Conclusion

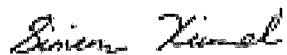
Based on the evidence provided and my professional experience, in my opinion Ms. Linsenmeir's death was caused by delays in appropriate medical evaluation and treatment. It is my opinion that it is more likely than not that Ms. Linsenmeir would have survived if she had received medically appropriate evaluation and treatment any time from September 29 through October 2, 2018. Her chances of survival if appropriately evaluated and treated were very likely from September 29 through at least October 1, and at least more likely than not on October 2. Relatively speaking, her

chances of survival if appropriately evaluated and treated were highest on September 29 and declined with the passage of time.

Compensation

I have not received compensation for my preparation of this report and have not testified in deposition or before the court as an expert previously. If I am called to testify at deposition or at trial in this case, I will be compensated (a) \$200/hour for deposition or trial preparation, or deposition or trial testimony, of four hours or less in a single day and (b) \$1800/day for deposition or trial preparation, or deposition or trial testimony, that exceeds four hours in a single day. I will also be compensated for reasonable travel expenses for any required travel more than a 30-mile radius outside of downtown Boston, MA. My compensation is not dependent on the content of my opinions or testimony.

Sincerely,



Simeon Kimmel, MD, MA